

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **001R-01-BAC** **South Fork Holston River**

Location: This segment includes the mainstem South Fork Holston River from the headwaters downstream to the Barton Creek confluence and also includes the mainstem from the Rowland Creek confluence downstream to Rush Creek.

City / County: Smyth Co. Washington Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A Fecal Coliform / 5A

The AWQM station located at 6CSFH097.42 had a 19% exceedence of the E.coli water quality standard and station 6CSFH093.01 had a 42% exceedence of the bacteria standard.

South Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.36
South Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			15.54

Sources:

Livestock (Grazing or Feeding Operations) Rural (Residential Areas) Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O02R-01-BAC** **South Fork Holston River**

Location: This segment includes the Lower South Fork Holston River from the South Holston Lake backwaters, river mile 73.00, upstream to the Rush Ck confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CSFH075.61, had a 26% exceedence of the E.coli water quality standard.

South Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.98

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O02R-03-BAC** Beaverdam Creek

Location: This segment includes the Beaverdam Creek mainstem from Tennessee line upstream to its confluence with South Fork Holston River.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CBVD000.07, had a 33% exceedence of the E. coli water quality standard.

Beaverdam Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.01

Sources:

Rural (Residential Areas)

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Tennessee and Big Sandy River Basins

Cause Group Code **O02R-04-BAC** **Laurel Creek**

Location: This segment extends from the Beaverdam Creek confluence upstream to the state line.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CLAL001.21, had a 17% exceedence of the E.coli water quality standard. Additional monitoring at 6CLAL000.10 showed a 17% exceedence of the fecal coliform water quality standard.

Laurel Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.14

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O02R-05-BAC** **Whitetop Laurel Creek**

Location: This segment includes the mainstem from the Straight Branch confluence downstream to the Laurel Ck confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CWLC000.79, had a 17% exceedence of the E. coli water quality standard.

Whitetop Laurel Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.19

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O03R-01-BAC** **Middle Fork Holston River**

Location: This segment extends from the Dutton Br. confluence downstream to the Neff community.

City / County: Smyth Co. Washington Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station, 6CMFH 53.36 had a 31% exceedence of the bacteria water quality standard. The AWQM station, 6CMFH045.72, had a 31% exceedence of the bacteria water quality standard and an additional station at 6CMFH040.67 had a 64% exceedence of the bacteria standard. Station 6CMFH033.40 had a 58% exceedence of the E.coli water quality standard. Station 6CMFH026.00 had a 38% exceedence of the fecal coliform water quality standard and station 6CMFH0027.14 had a 20% exceedence of the fecal coliform standard. Station 6CMFH013.21 had a 28% exceedence of the E.coli water quality standard.

Middle Fork Holston River

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Escherichia coli - Total Impaired Size by Water Type:

17.56

Middle Fork Holston River

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Fecal Coliform - Total Impaired Size by Water Type:

27.62

Sources:

Animal Feeding Operations
(NPS)

Grazing in Riparian or
Shoreline Zones

Livestock (Grazing or
Feeding Operations)

Rural (Residential Areas)

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O03R-01-BEN** **Bear Creek**

Location: This segment begins near the Rt. 622/ Rt. 694 intersection and extends upstream paralleling Rt. 694

City / County: Smyth Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Probabilistic Monitoring station , 6CBER004.10 was impaired based on the VSCI score.

Bear Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.06

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O04R-01-BAC** Hungry Mother Creek

Location: This segment includes the mainstem of Hungry Mother Creek downstream from the reservoir to the Middle Fork Holston River.

City / County: Smyth Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CHUN001.34, had a 33% exceedence of the E.coli water quality standard.

Hungry Mother Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.83

Sources:

Rural (Residential Areas)

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Tennessee and Big Sandy River Basins

Cause Group Code **O04R-03-BAC** **Laurel Springs Creek**

Location: This segment flows north from Adwolf to the Middle Fork Holston.

City / County: Smyth Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CLRL000.35, had a 82% exceedence of the E.coli water quality standard.

Laurel Springs Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.04

Sources:

Animal Feeding Operations
(NPS)

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Cause Group Code **O04R-04-BAC** Walker Creek

Location: This segment flows from the headwaters downstream to the Middle Fork Holston River near the intersection of route 659 and route 645.

City / County: Smyth Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station, 6CWAL000.09, had a 83% exceedence of the E.coli water quality standard.

Walker Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.78

Sources:

Animal Feeding Operations
(NPS)

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Tennessee and Big Sandy River Basins

Cause Group Code **O05R-01-BAC** **Three Creeks**

Location: This segment includes the following tributaries to Middle Fork Holston: Hutton, Hall, Byers, and their tributaries (Cedar Cr., West Fk Cedar Cr., East Fk Cedar Cr., Plum Cr., unnamed trib to Hutton Cr., unnamed trib to Hall Cr. and Tattle Branch).
City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A Fecal Coliform / 4A

Station 6CBYS000.23 had a 63% exceedence of the E.coli water quality standard and station 6CCED000.04 had a 75% exceedence of the E.coli standard. An additional station at 6CXDY000.17 had a 78% exceedences of the E.coli water quality standard. Station 6CHTO000.24 had a 75% exceedence of the E.coli standard.

Three Creeks	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.81
Three Creeks	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			18.08

Sources:

Animal Feeding Operations Grazing in Riparian or
(NPS) Shoreline Zones

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Tennessee and Big Sandy River Basins

Cause Group Code **O05R-01-BEN** **Three Creeks**

Location: This segment includes the following tributaries to Middle Fork Holston: Hutton, Hall Byers, and their tributaries (Cedar Cr., West Fk Cedar Cr., East Fk Cedar Cr., Plum Cr., unnamed trib to Hutton Cr., unnamed trib to Hall Cr., Tattle Branch).

City / County: Washington Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The following biological stations were found to be impaired based on their VSCI scores being lower than 60: 6CTAT000.50, 6CCED000.04, 6CHTO000.07 and 6CBYS000.08.

Three Creeks	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			32.62

Sources:

Animal Feeding Operations
(NPS)

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Tennessee and Big Sandy River Basins

Cause Group Code **O05R-02-BAC** **Greenway Creek**

Location: This segment includes the mainstem from the headwaters downstream to the confluence with the Middle Fk Holston River.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station 6CGRW000.09 had a 78% exceedence of the E.coli water quality standard.

Greenway Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.86

Sources:

Grazing in Riparian or
Shoreline Zones

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Tennessee and Big Sandy River Basins

Cause Group Code **O05R-05-BEN** **Middle Fork Holston River**

Location: This segment includes the mainstem Middle Fork Holston River from the Sulphur Springs Creek confluence to just downstream of Neff.

City / County: Smyth Co. Washington Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological stations, 6CMFH011.31 and 6CMFH023.41 found the segment impaired based on the VSCI scores.

Middle Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			17.00

Sources:

Animal Feeding Operations Source Unknown
(NPS)

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Tennessee and Big Sandy River Basins

Cause Group Code **O06R-01-BAC** **Wolf Creek**

Location: This segment extends from the Town Creek confluence downstream to the lake backwaters.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A Fecal Coliform / 5A

The AWQM station, 6CWLF001.18, had a 50% exceedence of the E.coli water quality standard.

Wolf Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.29
Wolf Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			6.62

Sources:

- Grazing in Riparian or
Shoreline Zones
- Livestock (Grazing or
Feeding Operations)
- Rural (Residential Areas)

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Tennessee and Big Sandy River Basins

Cause Group Code **O06R-01-BEN** **Wolf Creek**

Location: This segment extends from the Town Creek confluence downstream to the lake backwaters.

City / County: Washington Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6CWLF004.10 indicated moderate impairment

Wolf Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.62

Sources:

Animal Feeding Operations Rural (Residential Areas)
(NPS)

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Tennessee and Big Sandy River Basins

Cause Group Code **O06R-01-PCB** **Wolf Creek**

Location: This segment extends from the Town Creek confluence downstream to the lake backwaters.

City / County: Washington Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

This segment was listed based on the VDH fish consumption advisory.

Wolf Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			6.62

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O06R-02-BAC** **Fifteen Mile Creek**

Location: This segment extends from the headwaters downstream to the confluence with the South Holston Reservoir.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

Station 6CFIF000.96 had a 38% exceedence of the E.coli water quality standard and station 6CFIF006.16 had a 44% exceedence of the E. coli water quality standard.

Fifteen Mile Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.06

Sources:

Livestock (Grazing or Feeding Operations)	Loss of Riparian Habitat	Rural (Residential Areas)
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Tennessee and Big Sandy River Basins

Cause Group Code **O06R-03-BAC** **Spring Creek**

Location: This segment extends from the South Fork Holston Reservoir backwaters upstream to the headwaters.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CSPR000.18 had a 37% exceedence of the E.coli water quality standard.

Spring Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.37

Sources:

Livestock (Grazing or Feeding Operations) Rural (Residential Areas)

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Tennessee and Big Sandy River Basins

Cause Group Code **O07R-01-BAC** Beaver Creek & tributaries

Location: This segment includes the headwaters of Beaver Ck downstream to the TN political boundary. It also includes the headwaters of Little Creek, including Mumpower Creek, downstream to the TN political boundary in the City of Bristol.

City / County: Bristol City Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A Escherichia coli / 5A Fecal Coliform / 4A

The AWQM and TMDL stations revealed a 80% exceedence of the bacteria standard at 6CBEV015.27, an 89% exceedence at 6CBEV015.62, a 33% exceedence at 6CBEV016.59, a 67% exceedence at 6CBEV017.15, a 33% exceedence at 6CBEV017.96, a 56% exceedence at 6CBEV019.21, a 33% exceedence at 6CBEV020.82, a 54% exceedence at 6CBEV020.86, a 56% exceedence at 6CBEV022.29, a 42% exceedence at 6CMUM000.65 and a 75% exceedence at 6CXDR000.34.

Beaver Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			22.29

Beaver Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			2.12

Sources:

Animal Feeding Operations (NPS)	Grazing in Riparian or Shoreline Zones	Rural (Residential Areas)	Source Unknown
Wastes from Pets			

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Tennessee and Big Sandy River Basins

Cause Group Code **O07R-01-BEN** Beaver Creek

Location: This segment includes the mainstem from the headwaters of Beaver Ck downstream to TN political boundary including its tributaries..

City / County: Bristol City Washington Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological station located at 6CBEV023.99 was found to be impaired based on VSCI.

Beaver Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			14.70

Sources:

Animal Feeding Operations Streambank
(NPS) Modifications/destabilization

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Tennessee and Big Sandy River Basins

Cause Group Code **O07R-01-PB** Beaver Creek

Location: This segment includes the mainstem from Beaver Ck dam downstream to TN political boundary including tributaries.

City / County: Bristol City Washington Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Lead / 5A

The sediment station located at 6CBEV015.27 indicated that lead exceeded the ER-M guideline values.

Beaver Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Lead - Total Impaired Size by Water Type:			7.13

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O07R-01-PCB** Beaver Creek & Little Creek

Location: This segment includes the headwaters of Beaver Ck downstream to the TN political boundary and Little Cr from the headwaters downstream to the TN political boundary in the City of Bristol.

City / County: Bristol City Washington Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

Fish tissue stations(6CBEV015.27 and 6CLTL000.26) found PCB's in largemouth bass (1372.56 ppb), carp (1030.74 ppb) and northern hog suckers (101.92 ppb).

Beaver Creek & Little Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			16.82

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O09R-01-BAC** **Lick Creek**

Location: This segment extends from the Lynn Camp confluence, river mile 4.31, downstream to the North Fork Holston confluence.

City / County: Smyth Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CLIB000.08 had a 17% exceedence of the bacteria standard.

Lick Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.63

Sources:

Animal Feeding Operations
(NPS)

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Tennessee and Big Sandy River Basins

Cause Group Code **O09R-01-BEN** **Lick Creek**

Location: This segment extends from the Lynn Camp confluence, river mile 4.31, downstream to the North Fork Holston confluence.

City / County: Smyth Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological monitoring station located at 6CLIB003.65 was impaired based on the VSCI.

Lick Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.63

Sources:

Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O09R-03-BAC** **North Fork Holston River**

Location: This segment includes the mainstem from the headwaters downstream to the Lick Branch confluence.

City / County: Bland Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6CNFH127.12 had a 25% exceedence of the fecal coliform water quality standard.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			11.06

Sources:

Grazing in Riparian or
Shoreline Zones

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Tennessee and Big Sandy River Basins

Cause Group Code **O10R-01-BAC** **North Fork Holston River**

Location: This segment extends from the Laurel Creek confluence downstream to the confluence of Tumbling Creek. It also includes the mainstem from the confluence of Big Moccasin Ck downstream to the TN line.

City / County: Scott Co. Smyth Co. Washington Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A Fecal Coliform / 5A

AWQM station 6CNFH081.69 had a 50% exceedence of the bacteria water quality standard, station 6CNFH085.20 had a 25% exceedence and station 6CNFH089.25 had a 13% exceedence of the bacteria water quality standard.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			20.40
North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			1.83

Sources:

Animal Feeding Operations (NPS)	Industrial Point Source Discharge	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	Source Unknown
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Tennessee and Big Sandy River Basins

Cause Group Code **O10R-01-HG** **North Fork Holston River**

Location: This segment begins in Saltville and extends downstream to the VA/TN state line.

City / County: Scott Co. Smyth Co. Washington Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Mercury in Fish Tissue / 5A

Mercury contamination of the fish tissue prior to 1972 led to a ban on fish consumption by the VHD. The ban extends downstream for 80.4 miles, through watersheds; VAS-O11R, VASO12R, and VAS-O13R. Station 6CNFH080.43 exceeded the screening value for Hg in the water column and 6CNFH039.18 exceeded the screening values for Hg in sediment and fish tissue.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Mercury in Fish Tissue - Total Impaired Size by Water Type:			81.69

Sources:

Industrial Point Source Discharge	Livestock (Grazing or Feeding Operations)	Rural (Residential Areas)	Source Unknown
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Cause Group Code **O10R-01-PCB** **North Fork Holston River**

Location: This segment begins in Saltville and extends downstream to the VA/TN state line.

City / County: Scott Co. Smyth Co. Washington Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The VDH added PCB to the fish consumption ban in 12/13/2004. Stations 6CNFH059.65 and 6CNFH039.18 revealed PCBs in the sediment.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			81.69

Sources:

Animal Feeding Operations (NPS)	Grazing in Riparian or Shoreline Zones	Rural (Residential Areas)	Source Unknown
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Tennessee and Big Sandy River Basins

Cause Group Code **O10R-05-BAC** **Laurel Creek**

Location: This segment includes the headwaters of Laurel Creek within Jefferson National Forest upstream of the Roaring Fork confluence downstream to the North Fork Holston River confluence. It also includes Locust Cove Creek which is also a tributary to the North Fork Holston River.

City / County: Bland Co. Smyth Co. Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6CLAE014.52 had a 17% exceedence of the bacteria water quality standard and station 6CLOC000.12 had a 67% exceedence of the bacteria standard.

Laurel Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			28.18

Sources:

Animal Feeding Operations (NPS) Grazing in Riparian or Shoreline Zones Source Unknown

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Tennessee and Big Sandy River Basins

Cause Group Code **O10R-05-BEN** **Laurel Creek**

Location: This segment includes the headwaters within Jefferson National Forest upstream of the Roaring Fork confluence, as well as from the Little Tumbling Creek confluence at Tannersville downstream to the confluence with the North Fork Holston River.

City / County: Bland Co. Smyth Co. Tazewell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological stations located at 6CLAE001.68 and 6CLAE018.29 were impaired based on the VSCI.

Laurel Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.95

Sources:

Grazing in Riparian or Source Unknown
Shoreline Zones

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Tennessee and Big Sandy River Basins

Cause Group Code **O11L-02-PH** **Laurel Bed Lake**

Location: Laurel Bed Lake is a DGIF owned cool water fishery, located in Clinch Mountain Wildlife Management Area.

City / County: Russell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 4C

A station located at 6CLAU001.84 had a 18% exceedence of the pH water quality criteria.

Laurel Bed Lake	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			312.37

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-03-BEN** **North Fork Holston River**

Location: This segment extends from the confluence of Robertson downstream to the confluence of Tumbling Creek.

City / County: Smyth Co. Washington Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

A biological station located at 6CNFH080.45 was impaired based on the VSCI scores.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.83

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-04-BAC** **Logan Creek**

Location: Logan Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CLOG000.12 had a 17% exceedence of the E.coli water quality standard.

Logan Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.43

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-05-BAC** **Toole Creek**

Location: Toole Creek is a North Fork Holston tributary. This segment includes the mainstem from headwaters to North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CTOO000.25 had a 33% exceedence of the E.coli water quality standard.

Toole Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.99

Sources:

Animal Feeding Operations Rural (Residential Areas)
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-06-BAC** **Tumbling Creek**

Location: The Tumbling Ck segment extends from the North Fork Holston confluence upstream 1.58 miles.

City / County: Smyth Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

Station 6CTUM000.12 had 17% exceedence of the bacteria water quality standard.

Tumbling Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			1.57

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-07-BAC** **Wolf Creek**

Location: Wolf Creek is a North Fork Holston tributary and includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

Station 6CWOL000.04 had a 33% exceedence of the E.coli water quality standard.

Wolf Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			0.88

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O11R-08-BAC** **Brumley Creek**

Location: This segment includes the mainstem from the confluence with the North Fork Holston River upstream approximately 4 miles.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

AWQM station at 6CBRU000.02 had a 17% exceedence of the E.coli water quality standard.

Brumley Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.23

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O12R-02-BAC** **Abrams Creek**

Location: Abrams Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CABR001.00 had a 45% exceedence of the water quality standard for E.coli.

Abrams Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.37

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O12R-03-BAC** Cove Creek

Location: Cove Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Scott Co. Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CCOV002.44 had a 33% exceedence of the bacteria water quality standard.

Cove Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.69

Sources:

Industrial Point Source
Discharge

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O12R-04-BAC** **Little Moccasin Creek**

Location: Little Moccasin Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CLMC000.05 had a 42% exceedence of the E.coli water quality standard.

Little Moccasin Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.85

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O12R-05-BAC** **Nordyke Creek**

Location: Nordyke Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

Station 6CNOR000.14 had a 33% exceedence of the E.coli water quality standard.

Nordyke Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.98

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O12R-06-BAC** **Smith Creek**

Location: Smith Creek is a North Fork Holston tributary. This segment includes the mainstem from the headwaters to the North Fork Holston confluence.

City / County: Washington Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6CSMI000.22 had a 44% exceedence of the E.coli water quality standard.

Smith Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.86

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O13R-01-BEN** **North Fork Holston River**

Location: This segment of the North Fork Holston includes the mainstem from confluence of Cove Creek downstream to TN line.

City / County: Scott Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological stations 6CHNF007.78 and 6CNFH014.72 were impaired based on VSCI scores.

North Fork Holston River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			24.02

Sources:

- Animal Feeding Operations
(NPS)
- Rural (Residential Areas)
- Streambank
Modifications/destabilization

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O13R-03-BAC** **Four tribs. to NFH**

Location: This segment includes the mainstem of Blue Springs Branch from the headwaters to the confluence of the North Fork Holston and also includes the mainstem of Dowell Branch downstream to the confluence with the North Fork Holston. This segment also includes the mainstem of Hilton Creek approximately 1.5 miles upstream of the confluence with the North Fork Holston River and extending downstream to the NFH and 1.34 miles of an unnamed tributary immediately downstream of Hiltons Creek at Owen Corner..

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

AWQM station at 6CBLU000.15 had a 78% exceedence of the E.coli water quality standard, station 6CDOW000.02 had a 78% exceedence of the standard, station 6CHIL000.02 had a 22% exceedence and 6CXBV000.21 had a 56% exceedence of the E.coli water quality standard.

Four tribs. to NFH	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.23

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Rural (Residential Areas)
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **O14R-01-BAC** **Big Moccasin Creek**

Location: This segment begins 8.01 miles up stream of the PWS segment and continues downstream to rivermile 18.9 at unnamed tributary. It also includes the mainstem from Red Hill Branch confluence downstream to the North Fork Holston confluence.

City / County: Scott Co. Washington Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A Fecal Coliform / 5A

The AWQM station located at 6CBMC002.90 had a 15% exceedence of the bacteria water quality standard. Station 6CBMC026.32 had a 56% exceedence of the E.coli standard, station 6CBMC042.54 had a 44% exceedence and station 6CBMC049.05 had a 44% exceedence of the E.coli water quality standard.

Big Moccasin Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Escherichia coli - Total Impaired Size by Water Type:			27.92
Big Moccasin Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Fecal Coliform - Total Impaired Size by Water Type:			3.49

Sources:

Animal Feeding Operations Grazing in Riparian or Rural (Residential Areas)
(NPS) Shoreline Zones

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P01R-01-BAC** Clinch River

Location: This segment includes the mainstream from Lincolnshire Branch confluence downstream to Pounding Mill Branch.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BCLN346.60 had a 33% exceedence of the bacteria water quality standard and station 6BCLN339.53 had a 27% exceedence of the bacteria standard.

Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			11.51

Sources:

Agriculture Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P01R-01-BEN** Clinch River

Location: This segment includes the mainstream from Lincolnshire Branch confluence downstream to Pounding Mill Branch.

City / County: Tazewell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological station at 6BCLN346.80 was impaired based on SCI scores.

Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			5.50

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P01R-02-BAC** Plum Creek

Location: This segment extends from the headwaters to the Clinch River confluence.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BPLU000.40had a 33% exceedence of the bacteria water quality standard.

Plum Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			5.06

Sources:

Grazing in Riparian or
Shoreline Zones

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P02R-02-BAC** **Indian Creek**

Location: This segment includes the mainstem from Greasy Creek to the Clinch River confluence. Endangered species immediately downstream.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station located at 6BIDI001.49 had a 18% exceedence of the E.coli water quality standard.

Indian Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Escherichia coli - Total Impaired Size by Water Type:			8.85
Indian Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Fecal Coliform - Total Impaired Size by Water Type:			8.85

Sources:

Animal Feeding Operations Source Unknown
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P03R-01-BAC** **Middle Creek**

Location: This segment includes the lower mainstem from mile 2.53 downstream to Clinch River confluence.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BMID000.20 had a 30% exceedence of the E.coli water quality standard.

Middle Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.65

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P03R-01-BEN** **Coal Creek**

Location: This segment extends from confluence with Clinch River upstream to the Left Fork Coal Creek confluence; Tazewell County.
City / County: Tazewell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The Probabilistic Monitoring station at 6BCOL001.93 was impaired based on the VSCI scores.

Coal Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.07

Sources:

Coal Mining

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P03R-02-BAC** Clinch River and Tributaries

Location: The community of Raven is located here and the segment includes the mainstem from just upstream of the Town Hill Creek confluence downstream to the Mill Creek confluence. It also includes the mainstem of the Clinch River from the Mill Creek confluence upstream to Raven-Doran's raw water intake.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A Fecal Coliform / 5A

AWQM stations located at 6BCLN315.11 and 6BCLN321.13 had 18% and 24% exceedences of the E.coli water quality standard.

Clinch River and Tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.39
Clinch River and Tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			3.10

Sources:

Animal Feeding Operations Source Unknown
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P04R-01-BAC** **Lewis Creek**

Location: This segment includes the mainstem from the Stone Branch confluence downstream to the Clinch River confluence.

City / County: Russell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BLWS000.06 had a 18% exceedence of the bacteria water quality standard.

Lewis Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			4.83

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P04R-01-BEN** **Lewis Creek**

Location: This segment includes the mainstem from the Stone Branch confluence downstream to the Clinch River confluence.

City / County: Russell Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological station located at 6BLWS000.90 and the Probabilistic Monitoring station located at 6BLWS003.88 both were impaired based on the VSCI scores.

Lewis Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.83

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P04R-02-BEN** **Swords Creek**

Location: This segment includes the mainstem from Sulphur Spring Branch confluence downstream to confluence with Clinch River.

City / County: Russell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The historical biological station located at 6BSWO000.11 was impaired based on VSCI scores.

Swords Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.88

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P05R-01-BAC** **Indian Creek**

Location: This segment extends from the Hwy 19 bridge to the Little River confluence at Wardell.

City / County: Russell Co. Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BIDN000.69 had a 50% exceedence of the bacteria water quality standard.

Indian Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			3.98

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P05R-02-BAC** **Liberty Creek**

Location: This segment begins at Liberty from the spring downstream of Rt 608 bridge and extends upstream to an unnamed tributary confluence.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BLIB001.89 had a 67% exceedence of the bacteria water quality standard.

Liberty Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			1.99

Sources:

Grazing in Riparian or
Shoreline Zones

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P05R-04-BAC** Little River

Location: This segment includes the mainstem above the Claypool Hill STP downstream to the confluence with the Clinch River.

City / County: Russell Co. Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BLTR000.75 had a 20% exceedence of the bacteria water quality standard and station 6BLTR0018.19 had a 33% exceedence of the bacteria standard.

Little River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			23.20

Sources:

Agriculture Grazing in Riparian or
Shoreline Zones

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P05R-05-BAC** **Maiden Spring Creek**

Location: This segment begins at the unnamed tributary with Buchanan Cemetery and continues downstream to the Little River confluence.

City / County: Tazewell Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station 6BMSC001.53 had a 25% exceedence of the bacteria water quality standard and station 6BMSC008.98 had a 42% exceedence of the bacteria standard.

Maiden Spring Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			15.08

Sources:

Agriculture Animal Feeding Operations Rural (Residential Areas)
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P06R-01-BAC** **Big Cedar Creek**

Location: This segment begins 5 miles upstream of Lebanon's raw water intake and continues downstream to the confluence with the Clinch River. It also includes Loop Creek from Rt 80 to the Elk Garden Creek confluence. It also includes Burgess Creek from the Campbell Branch confluence to the Big Cedar Creek confluence. This segment also includes Elk Garden Creek from Elk Garden to the confluence with Big Cedar Creek.

City / County: Russell Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station on Big Cedar Creek at 6BBCD001.89 had a 33% exceedence of the E.coli water quality standard, station 6BBCD6.66 had 25% exceedence of the E.coli standard and station 6BBCD009.83 had a 67% exceedence of the bacteria water quality standard. AWQM station on Burgess Cr. at 6BBUG000.10 had a 67% exceedence of the E.coli water quality standard. The AWQM station on Elk Garden Creek had a 75% exceedence of the E.coli water quality standard. The AWQM station on Loop Creek at 6BLOO004.25 had a 50% exceedence of the E.coli water quality standard.

Big Cedar Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			18.86

Big Cedar Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			5.23

Sources:

Agriculture	Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Rural (Residential Areas)
Septage Disposal	Source Unknown		

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P07R-01-BAC** Clinch River

Location: This segment includes the mainstem from the Big Cedar Creek confluence downstream to the Dumps Creek confluence. It also includes Thompson Creek from Coulwood to the confluence with the Clinch River and Weaver Creek from the confluence with Hart Creek to the confluence with the Clinch River.

City / County: Russell Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BCLN271.50 had a 19% exceedence of the E.coli standard. Station 6BTMP003.58 had a 50% exceedence of the E.coli water quality standard and station 6bWEA004.32 had a 50% exceedence of the E.coli standard.

Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			23.84

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P08R-01-BAC** **Dumps Creek**

Location: This segment includes the mainstem from the Hurricane Fork confluence downstream to the confluence with Clinch River at Carbo.

City / County: Russell Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A

The AWQM station located at 6BDUM000.04 had a 19% exceedence of the E.coli water quality standard.

Dumps Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.41

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P08R-01-BEN** **Dumps Creek**

Location: This segment includes the mainstem from the Hurricane Fork confluence downstream to the confluence with Clinch River at Carbo.

City / County: Russell Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological stations located at 6BDUM000.23 was impaired based on the VSCI score.

Dumps Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.41

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P09R-01-BAC** Clinch River

Location: This segment includes the mainstem Clinch from the Little Stony Ck confluence downstream to the Staunton Ck confluence.

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6BCLN237.09 had a 11% exceedence of the bacteria water quality standard.

Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			6.07

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P09R-03-BAC** **Staunton Creek & Fall Creek**

Location: This segment includes both Staunton and Fall Creek from their headwaters to their confluences with the Clinch River

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BFLC000.52 had a 25% exceedence of the E.coli water quality standard and station 6BSUT001.71 had a 17% exceedence of the E.coli standard.

Staunton Creek & Fall Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.32

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P09R-04-BAC** **Little Stony Creek**

Location: This segment extends from the confluence with the Clinch River upstream to the confluence with Star Branch.

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BLSR000.33 had a 17% exceedence of the E.coli water quality standard.

Little Stony Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.64

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P09R-05-BAC** **Russell Creek**

Location: This segment includes the headwaters of Russell Creek downstream to the confluence with the Clinch River.

City / County: Russell Co. Scott Co. Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BRUS001.25 had a 18% exceedence of the E.coli water quality standard.

Russell Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.06

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P10R-01-BAC** **Lick Creek & tributaries**

Location: This segment includes the headwaters and continues downstream to the confluence with the Clinch River. It also includes Cigarette Hollow, Right Fork Lick Creek and Laurel Branch.

City / County: Dickenson Co. Russell Co. Wise Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A Fecal Coliform / 5A

AWQM station located at 6BLCC006.75 had a 58% exceedence of the E.coli water quality standard, station 6BLCC002.84 had a 55% exceedence of the E.coli standard and station 6BLCC000.09 had a 42% exceedence of the E.coli water quality standard.

Lick Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			9.45
Lick Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			18.40

Sources:

Rural (Residential Areas) Septage Disposal Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P10R-01-BEN** **Lick Creek & tributaries**

Location: This segment includes the headwaters and continues downstream to the confluence with the Clinch River. It also includes Cigarette Hollow, Right Fork Lick and Laurel Branch.

City / County: Dickenson Co. Russell Co. Wise Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological stations located at 6BLCC000.09, 6BLCC000.65 and 6BLCC005.99 were all impaired based on VSCI scores.

Lick Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			18.40

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-01-BEN** **Guest River**

Location: This segment begins at the confluence with Sepulcher Creek and extends downstream to the confluence with Crab Orchard Creek confluence.

City / County: Norton City Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

DEQ biological stations 6BGUE006.50 and 6BGUE016.54 were impaired based on VSCI scores.

Guest River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			21.78

Sources:

Animal Feeding Operations (NPS)	Grazing in Riparian or Shoreline Zones	Source Unknown
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-03-BAC** **Guest River**

Location: This segment extends from the Guest River mainstem at the confluence with Bad Branch downstream to the confluence with the Clinch River. It also includes Bear Creek from the confluence with Yellow Creek downstream to the confluence with the Guest River.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

DEQ AWQM station 6BBER001.14 had a 16% exceedence of the E.coli water quality standard and station 6BGUE006.50 had a 14% exceedence of the E.coli standard.

Guest River	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Escherichia coli - Total Impaired Size by Water Type:			8.92
Guest River	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Fecal Coliform - Total Impaired Size by Water Type:			7.09

Sources:

Atmospheric Deposition - Rural (Residential Areas) Source Unknown
Acidity

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-03-PCB** **Guest River**

Location: This segment begins at the confluence with Parson's Branch and continues downstream to the confluence with the Clinch River.

City / County: Norton City Wise Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

Sediment and Fish Tissue stations located at 6BGUE020.37, 6BGUE014.49, 6BGUE009.33 indicated levels of PCBs in carp that exceeded the TV for PCBs. Sediment and Fish Tissue stations located at 6BGUE001.14 and 6BGUE006.45 found PCB levels that exceeded the VDH level of concern.

Guest River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			25.24

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-05-BAC** **Crab Orchard Creek**

Location: This segment extends from the headwaters downstream to the Guest River confluence.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A

The AWQM station located at 6BCRA000.31 had a 33% exceedence of the E.coli water quality standard.

Crab Orchard Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.42

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-06-BAC** Little Tom's Creek

Location: This segment includes the headwaters and continues downstream to the Tom's Ck confluence.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A

The AWQM station located at 6BLTF000.68 had a 80% exceedence of the E.coli water quality standard.

Little Tom's Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			4.38

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-08-BAC** **Toms Creek**

Location: This segment extends from the headwaters of Toms Creek downstream to the Guest River confluence.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A

The AWQM stations located at 6BTMS000.35 and 6BTMS000.60 had 33% and 60% exceedences of the E.coli water quality standard.

Toms Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.60

Sources:

Atmospheric Deposition - Rural (Residential Areas)
Acidity

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P11R-11-BEN** **Machine Creek**

Location: This segment includes the headwater downstream to the Guest River confluence.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The USFS monitoring site, 9116, indicated moderate impairment.

Machine Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.16

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P12R-01-BEN** **Bark Camp Branch**

Location: This segment includes the headwaters and tributary and continues downstream to the Stony Creek confluence.

City / County: Scott Co. Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

DEQ biological station 6BBAR000.07 was impaired based on the VSCI score. USFS monitoring station 9150 indicated slight impairment.

Bark Camp Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.01

Sources:

Atmospheric Deposition -
Acidity

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P12R-02-BEN** **Devil Fork**

Location: This segment begins at the headwaters of Devil Fork and continues downstream to the confluence with Straight Fork. This tributary is located on the East Stone Gap USGS Quad Map.

City / County: Scott Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

DEQ biological station 6BDEV000.07 was impaired based on the VSCI score and USFS monitoring station 9131 was also impaired.

Devil Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.30

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P12R-03-BAC** **Stony Creek**

Location: This segment extends from the Coalpit Branch confluence downstream to the Chimney Rock Fork confluence.

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BSNY001.98 had a 22% exceedence of the E.coli water quality standard.

Stony Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			5.04

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P13R-02-PCB** **Stock Creek**

Location: This segment extends from stream mile 4.56 downstream to the Clinch River confluence.

City / County: Scott Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The Sediment and Fish Tissue station located at 6BSTO004.56 found PCBs in fish that exceeded the DEQ screening criteria.

Stock Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			4.51

Sources:

Loss of Riparian Habitat

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P13R-03-BAC** Clinch, Cove, Stock Cr.

Location: This segment includes the mainstem of the Clinch River from the Copper Ck confluence downstream to the Tennessee political boundary. It also includes Lower Cove Creek from its confluence with Millstone Branch to the Clinch River. It also includes Stock Creek from stream mile 4.56 downstream to the Clinch River confluence.

City / County: Scott Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BCLN206.70 had a 13% exceedence of the E.coli water quality standard. Station 6BCOV001.68 had a 44% exceedence of the E.coli standard and station 6BSTO000.45 had a 44% exceedence of the E.coli water quality standard.

Clinch, Cove, Stock Cr.	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			21.14

Sources:

Livestock (Grazing or Feeding Operations)	Rural (Residential Areas)	Source Unknown
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P14R-01-BAC** **Copper Creek & Moll Creek**

Location: This segment extends from Grassy Creek confluence upstream to the headwaters of Copper Creek. It also includes the lower most segment of Valley Creek that confluences with Copper Creek.

City / County: Russell Co. Scott Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The AWQM station located at 6BCOP047.75 had a 55% exceedence of the E.coli water quality standard. Station 6BCOP052.77 had a 44% exceedence of the E.coli standard, Moll Creek had 55% exceedence of the E.coli standard, and station 6BVAL000.25 had a 22% exceedence of the E.coli water quality standard.

Copper Creek & Moll Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			28.31

Sources:

Livestock (Grazing or
Feeding Operations)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P15R-00-BAC** **North Fork Clinch River**

Location: This segment begins at the Fraley Branch confluence and extends downstream to the Tennessee political boundary.

City / County: Scott Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station located at 6BNFC010.65 had a 55% exceedence of the E.coli water quality standard. Station 6BNFC018.68 had a 33% exceedence of the E.coli standard and station 6BNFC003.80 had a 44% exceedence of the bacteria water quality standard.

North Fork Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.01
North Fork Clinch River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			5.59

Sources:

Acid Mine Drainage

Livestock (Grazing or
Feeding Operations)

Unpermitted Discharge
(Domestic Wastes)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P16R-01-BAC** **Blackwater Creek**

Location: This segment includes the Blackwater Creek mainstem from the East Fork Blackwater Creek confluence downstream to the Tennessee political boundary.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station located at 6BBKW005.82 had a 67% exceedence of the E.coli water quality standard.

Blackwater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.11
Blackwater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			2.11

Sources:

Acid Mine Drainage

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P17R-01-BAC** **Callahan Creek**

Location: This segment includes the mainstem from above Appalachia at Possum Trot Hollow downstream to the Powell River confluence.

City / County: Norton City Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A Escherichia coli / 5A Fecal Coliform / 4A

The DEQ special study station located at 6BCAL000.03 had a 21% exceedence of the E.coli water quality standard and station 6BCAL003.19 had a 28% exceedence of the E.coli standard.

Callahan Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.12
Callahan Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			5.10

Sources:

Acid Mine Drainage Rural (Residential Areas) Septage Disposal

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P17R-01-BEN** **Callahan Creek**

Location: This segment includes the lower mainstem from the Preacher Ck confluence downstream to the confluence with Powell River.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological monitoring station located at 6BCAL000.03 was moderately impaired.

Callahan Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.67

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P17R-02-BAC** **Powell River**

Location: This segment begins at the Benges Branch confluence and continues downstream to Roaring Fork. It also includes the mainstem from Pigeon Creek downstream to Dakota St. in Big Stone Gap, river mile 177.53.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A Fecal Coliform / 5A

The AWQM station located at 6BPOW179.20 had a 44% exceedence of the E.coli water quality standard and station 6BPOW180.62 had a 58% exceedence of the E.coli standard. Station 6BPOW193.38 had a 66% exceedence of the Fecal Coliform water quality standard.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.62
Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			5.23

Sources:

Agriculture

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P17R-02-BEN** Powell River

Location: This segment of the Powell River begins at the Roaring Branch confluence, 180.83, and continues downstream to Dakota St. in Big Stone Gap, river mile 177.53.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological monitoring station located at 6BPOW179.20 was impaired based on VSCI scores.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.62

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P17R-03-BEN** **Black Creek**

Location: This segment includes Black Ck and its tributaries from the impoundment downstream to the Powell River confluence.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

Based on a special study funded by DMME, the stream benthic community was found to be impaired. The TMDL is complete

Black Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.19

Sources:

Acid Mine Drainage

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P18L-01-DO** **Big Cherry Reservoir**

Location: This reservoir is located east of East Stone Gap on Powell Mountain

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Oxygen, Dissolved / 4C

Monitoring station 6BPLL012.79 had a 44% exceedence of the dissolved oxygen water quality criteria and station 6BPLL012.99 had a 22% exceedence of the dissolved oxygen criteria.

Big Cherry Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:		102.94	

Sources:

Animal Feeding Operations Rural (Residential Areas)
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P18L-01-PH** **Big Cherry Reservoir**

Location: This reservoir is located east of East Stone Gap on Powell Mountain

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 4C

Monitoring station 6BPLL012.79 had a 56% exceedence of the pH water quality criteria and station 6BPLL012.99 had a 79% exceedence of the pH criteria.

Big Cherry Reservoir	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			102.94

Sources:

- Natural Conditions - Water
- Quality Standards Use
- Attainability Analyses
- Needed

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P18R-01-BAC** **South Fork Powell River**

Location: This segment begins at the Big Cherry Reservoir and continues downstream to the Beaverdam Creek confluence.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

AWQM station located at 6BPLL006.38 had a 33% exceedence of the bacteria water quality standard.

South Fork Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			6.32

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P18R-01-BEN** **South Fork Powell River**

Location: This segment includes the mainstem, from Butcher Fork confluence downstream to confluence with Powell River.

City / County: Wise Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological monitoring stations 6BPLL002.55 and 6BPLL004.40 were moderately impaired.

South Fork Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			3.71

Sources:

Loss of Riparian Habitat Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P18R-02-BAC** Butcher Fork

Location: This segment includes the headwaters downstream to the South Fork Powell River confluence.

City / County: Wise Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

AWQM station located at 6BBUH000.76 had a 42% exceedence of the bacteria water quality standard.

Butcher Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			4.86

Sources:

Animal Feeding Operations
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P19R-01-BAC** Powell River

Location: This segment extends from confluence of Poor Valley Ck downstream to the PWS segment.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

AWQM station located at 6BPOW165.78 had a 12% exceedence of the bacteria water quality standard.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			6.36

Sources:

Agriculture Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P19R-01-BEN** Powell River

Location: This segment extends from confluence of Poor Valley Ck downstream to the PWS segment.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6BPOW166.92 was moderately impaired.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.36

Sources:

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P19R-02-BEN** **Poor Valley Creek**

Location: This segment includes the headwaters of Poor Valley Creek downstream to its confluence with the Powell River.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4C

This segment was miss-categorized in 2004. USFS monitored site 9120 and found a moderate impairment due to drought conditions.

Poor Valley Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			2.69

Sources:

- Natural Conditions - Water
- Quality Standards Use
- Attainability Analyses
- Needed

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20L-01-DO** **Lake Keokee**

Location: This lake is located south of Exeter on Stone Mountain.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 4C

The DEQ monitoring station located at 6BPWL024.64 had a 51% exceedence of the dissolved oxygen water quality criteria.

Lake Keokee	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			97.47

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20L-01-PH** **Lake Keokee**

Location: This lake is located south of Exeter on Stone Mountain.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 4C

The DEQ monitoring station located at 6BPWL024.64 had a 47% exceedence of the pH water quality criteria.

Lake Keokee	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			97.47

Sources:

- Natural Conditions - Water
- Quality Standards Use
- Attainability Analyses
- Needed

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20R-00-BEN** **Straight Creek & tributaries**

Location: This segment includes not only the headwaters of Straight Creek downstream to the North Fork Powell confluence but also its tributaries including Bailey's Trace, Ely Cr., Gin Cr., Lick Br., Puckett Cr., and Stone Cr.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 4A Benthic-Macroinvertebrate Bioassessments / 5A

The following DEQ biological stations were found to be moderately impaired: 6BSTA000.11, 6BSTA000.40, 6BSTA000.54, 6BSTA001.10, 6BSTA002.48, 6BSTA3.62, 6BSTC000.06, 6BSTC000.27 and 6BSTC003.27. A special study contracted by DMLR and USCOE verified the benthic impairments of Lick Br. And Ely Cr.

Straight Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			33.18

Sources:

Acid Mine Drainage	Rural (Residential Areas)	Source Unknown	Surface Mining
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20R-01-BAC** **North Fork Powell River**

Location: This segment extends from the Straight Ck confluence, river mile 6.25, downstream to the Powell River confluence.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BPWL001.49 had a 35% exceedence of the E.coli water quality standard and station 6BPWLL004.10 had a 16% exceedence of the E.coli standard.

North Fork Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.01

Sources:

Septage Disposal

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20R-01-BEN** **North Fork Powell River**

Location: This segment extends form the Straight Creek confluence at river mile 6.25, downstream to the Powell River confluence.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological monitoring stations 6BPWL005.46 and 6BPWL004.40 were moderately impaired.

North Fork Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.01

Sources:

- Loss of Riparian Habitat
- Streambank
Modifications/destabilization

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P20R-02-BAC** **Straight Creek**

Location: This segment extends from the headwaters downstream to the North Fork Powell confluence.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 4A

The AWQM station located at 6BSR001.11 had a 47% exceedence of the E.coli water quality standard.

Straight Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			6.64

Sources:

Coal Mining (Subsurface)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P21R-02-BAC** **Hardy Creek**

Location: This segment includes the Hardy Creek mainstem & its tributaries.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BHAR000.34 had a 37% exceedence of the bacteria water quality standard.

Hardy Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			12.13

Sources:

- Loss of Riparian Habitat
- Streambank
Modifications/destabilization
- Surface Mining

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P21R-03-BAC** Powell River

Location: This segment includes the mainstem of the Powell River from the confluence of Town Creek downstream to the confluence of Dry Creek. It also includes Town Creek which is located south of Jonesville.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

The AWQM station located at 6BPOW138.91 had a 12% exceedence of the E.coli water quality standard and station 6BTOW001.32 had a 36% exceedence of the E.coli standard.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			15.00

Sources:

Coal Mining (Subsurface)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P21R-03-BEN** Powell River

Location: This segment includes the mainstem of the Powell River from the confluence of North Fork Powell River downstream to the Station Creek confluence.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A probabilistic biological monitoring station was located at 6BPOW156.57; VSCI scores were 50 & 57.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			6.45

Sources:

Livestock (Grazing or
Feeding Operations)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P22R-01-BAC** **Wallen Creek**

Location: This segment begins at the confluence of Lone Branch and continues downstream to the confluence with Powell River.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BWAL000.12 had a 27% exceedence of the E.coli water quality standard.

Wallen Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			2.02

Sources:

Animal Feeding Operations
(NPS)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P23R-01-BEN** Powell River

Location: This segment extends from the Hardy Creek confluence downstream to Yellow Creek confluence.

City / County: Lee Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A biological monitoring station located at 6BPOW120.12 was sampled on 10.21.1998, 06.21.1999, and 06.15.2000; most recent results indicate slight impairment.

Powell River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			8.42

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P23R-02-BAC** **Martin Creek**

Location: This segment includes the headwaters and extends downstream to the TN political boundary.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BMTN003.56 had a 67% exceedence of the E.coli water quality standard.

Martin Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			9.62

Sources:

Livestock (Grazing or Feeding Operations) Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **P24R-01-BAC** **Indian Creek**

Location: This segment includes the mainstem from the confluence of Machine Branch downstream to the Tennessee political boundary.

City / County: Lee Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6BIND009.12 had a 22% exceedence of the E.coli water quality standard.

Indian Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.99

Sources:

Livestock (Grazing or
Feeding Operations)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q03R-01-BEN** Pawpaw Creek

Location: This segment includes the mainstem from KY state line downstream to the Knox Ck confluence, along SR 643.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological station located at 6APPW000.50 was impaired based on VSCI scores.

Pawpaw Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			4.53

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q03R-02-BAC** **Knox Creek**

Location: This segment includes the mainstem from the headwaters to the KY political boundary.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 4A

Fecal Coliform / 4A

The AWQM station located at 6AKOX014.17 had a 25% exceedence of the fecal coliform standard and station 6AKOX008.11 had a 61% exceedence of the E.coli water quality standard.

Knox Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Escherichia coli - Total Impaired Size by Water Type:			16.92
Knox Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Fecal Coliform - Total Impaired Size by Water Type:			7.56

Sources:

Septage Disposal

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q03R-02-BEN** **Knox Creek**

Location: This segment includes the mainstem from the headwaters to the KY political boundary.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological station located at 6AKOX011.67 was impaired based on VSCI scores.

Knox Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			16.92

Sources:

Rural (Residential Areas) Septage Disposal

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q03R-02-PCB** **Knox Creek & tributaries**

Location: This segment includes the mainstem from the headwaters to the KY political boundary. It also includes all tributaries to Knox Cr. that were included in the December 2005 VDH Fish Consumption Ban update including Guess Fork.

City / County: Buchanan Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

Fish Tissue stations located at 6AKOX0023.25, 6AKOX0020.36, 6AKOX0019.30, 6AKOX0017.97, 6AKOX0014.37, 6AKOX12.06, 6AKOX10.98, 6AKOX8.14 indicated an exceedence of the DEQ screening value for PCBs and the VDH human health criteria for PCBs.

Knox Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			102.28

Sources:

Loss of Riparian Habitat	Rural (Residential Areas)	Source Unknown	Streambank Modifications/destabilization
Surface Mining			

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q03R-03-BAC** **Guess Fork**

Location: Guess Fork is a Knox Creek tributary, found on Panther and Hurley quad sheets.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /
VA Category: Fecal Coliform / 5A

The AWQM station located at 6AGIE000.04 had a 33% exceedence of the bacteria water quality standard.

Guess Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			8.43

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-01-BAC** **Levisa Fork & tributaries**

Location: This segment includes the Levisa Fork mainstem from the headwaters downstream to the Slate Cr. confluence and also from the Bull Cr. confluence downstream to the KY state line. This segment also includes Slate Creek from the Upper Rockhouse Branch confluence downstream to the confluence with Levisa Fork. It also includes the Big Prater Cr. Mainstem from the Trace fork Br. confluence downstream to the confluence with Levisa Fork. It also includes the mainstem of Dismal Cr. from the confluence of Hurricane Br. to the confluence with Levisa Fork.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 5A

Fecal Coliform / 5A

The AWQM station located at 6ALEV156.82 had a 25% exceedence of the fecal coliform water quality standard, station 6ADIS001.21 had a 18% exceedence of the E.coli water quality standard, station 6ADIS014.33 had a 16% exceedence of the E.coli standard, station 6ABIP000.18 had a 33% exceedence of the bacteria standard, station 6ALEV143.86 had a 13% exceedence of the bacteria standard, station 6ASAT000.03 had a 33% exceedence of the bacteria standard and station 6ALEV131.52 had a 27% exceedence of the bacteria water quality standard.

Levisa Fork & tributaries

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Escherichia coli - Total Impaired Size by Water Type:

13.75

Levisa Fork & tributaries

Recreation

Estuary
(Sq. Miles)

Reservoir
(Acres)

River
(Miles)

Fecal Coliform - Total Impaired Size by Water Type:

7.74

Sources:

Loss of Riparian Habitat

Rural (Residential Areas)

Septage Disposal

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-01-BEN** **Levisa Fork & tributaries**

Location: This segment includes the Levisa Fork mainstem from the confluence of Garden Ck, river mile 155.94, downstream to the confluence of Bull Creek and from the Rocklick Branch confluence downstream to the KY state line.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The AWQM station located at 6ASAT000.05 was impaired based on VSCI scores. Station 6ALEV151.90 was found to be severely impaired in 1991 and station 6ALEV130.29 was moderately impaired.

Levisa Fork & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			14.69

Sources:

Loss of Riparian Habitat	Source Unknown	Streambank Modifications/destabilization	Surface Mining
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-01-PCB** **Levisa Fork & Garden Creek**

Location: This segment begins at the Levisa Fork headwaters and continues downstream to the KY state line. It also includes Garden Creek from the confluence of Right Fk Garden Cr. downstream to the confluence with Levisa Fork.

City / County: Buchanan Co.

Use(s): Fish Consumption

Cause(s) /

VA Category: PCB in Fish Tissue / 5A

The Fish Tissue station locate at 6AGAR000.16 found PCBs in the sediment and station 6AGAR001.78 exceeded DEQ's screening value for PCBs. Station 6ALEV130.00 exceeded the VDH human health criteria for PCBs. PCBs were also detected at Fish Tissue station 6ALEV151.26, 6ALEV145.86, 6ALEV134.82, and 6ALEV130.00.

Levisa Fork & Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			23.06

Sources:

Coal Mining Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-02-BAC** **Garden Creek**

Location: This segment includes the headwaters of Garden Ck downstream to the confluence with Levisa Fork and Right Fork Garden Creek from the headwaters downstream to the confluence with Garden Creek.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /

VA Category: Escherichia coli / 4A Fecal Coliform / 4A

The AWQM station located at 6AGAR000.16 had a 18% exceedence of the E.coli water quality standard. Station 6AGAR005.25 had a 25% exceedence of the E.coli standard, station, 6AGRF004.97 had a 50% exceedence of the E.coli water quality standard.

Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			17.54
Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Fecal Coliform - Total Impaired Size by Water Type:			1.80

Sources:

Rural (Residential Areas) Septage Disposal Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-02-BEN** **Garden Creek**

Location: This segment includes the headwaters of Garden Ck downstream to the confluence with Levisa Fork and Right Fork Garden Creek from the headwaters downstream to the confluence with Garden Creek.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 4A Benthic-Macroinvertebrate Bioassessments / 5A

The biological stations located at 6AGAR002.00, 6AGAR005.25, 6AGRF000.56 and 6AGRF004.97 were impaired based on VSCI scores.

Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			17.54

Sources:

Loss of Riparian Habitat	Rural (Residential Areas)	Septage Disposal	Streambank Modifications/destabilization
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Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q04R-02-CHLR** **Garden Creek**

Location: This segment extends from the confluence with Levisa Fork, upstream to confluence of Right Fk Garden Ck.

City / County: Buchanan Co.

Use(s): Aquatic Life Wildlife

Cause(s) /
VA Category: Chloride / 5A

The AWQM station located at 6AGAR000.16 had one exceedence of the chronic freshwater standard for chlorides in January 2001. There were no exceedences in 2006.

Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Chloride - Total Impaired Size by Water Type:			1.80
Garden Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Wildlife			
Chloride - Total Impaired Size by Water Type:			1.80

Sources:

Coal Mining (Subsurface) Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q05R-00-TEMP** **Dismal Creek**

Location: This segment includes Dismal Creek from the confluence of Long Br to the confluence with Levisa Fork.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

The AWQM station located at 6ADIS001.24 had a 11.5% exceedence of the temperature water quality standard for WQS Class V waters.

Dismal Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			5.31

Sources:

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q08R-01-BAC** **Bull Creek & tributaries**

Location: This segment includes the Bull Ck mainstem and tributaries, including Convict Hollow, Belcher Branch, Deel Fork, Cove Hollow. This segment also includes Poplar Cr. at the confluence with Knotty Poplar Fk and continues downstream to the confluence with Levisa Fk.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6ABLC000.85 had a 75% exceedence of the E.coli water quality standard and station 6APLR000.06 had a 44% exceedence of the E.coli standard.

Bull Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			3.14

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q08R-01-BEN** **Bull Creek & tributaries**

Location: This segment includes the Bull Ck mainstem and tributaries, including Convict Hollow, Belcher Branch, Deel Fork, Cove Hollow.

City / County: Buchanan Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6ABLC002.30 was impaired based on the VSCI scores.

Bull Creek & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			23.01

Sources:

Loss of Riparian Habitat Source Unknown Streambank
Modifications/destabilization Surface Mining

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q09R-01-BAC** **Russell Fork**

Location: This segment includes the unassessed stream segments in the headwaters of Russell Fork downstream to the confluence of Hollow Poplar Branch.

City / County: Buchanan Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6ARSS047.10 had a 38% exceedence of the E.coli water quality standard and station6ARSS041.08 had a 25% exceedence of the bacteria water quality standard.

Russell Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			8.68

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q09R-02-BEN** Sullivan Branch

Location: This segment begins at the headwaters of Sullivan Branch and continues downstream to the confluence with Indian Creek.

City / County: Buchanan Co. Dickenson Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6ASLV000.85 was impaired based on the VSCI scores.

Sullivan Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.60

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q11R-02-BAC** **McClure River**

Location: This segment begins at the Buffalo Cr. confluence downstream to the Road Br. confluence, includes the communities of McClure and Stratton. This segment also includes Buffalo Cr. from the headwaters downstream to the confluence of McClure River.

City / County: Dickenson Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The station identified as BC on Buffalo Cr. had a 50% exceedence of the E.coli water quality standard and station 6AMCR007.46 had a 17% exceedence of the bacteria water quality standard and station 6AMCR014.69 had a 33% exceedence of the bacteria standard.

McClure River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			16.32

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q11R-02-BEN** **McClure River**

Location: This segment his segment begins at the Buffalo Cr. confluence downstream to the Road Br. confluence, includes the communities of McClure and Stratton.

City / County: Dickenson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6AMCR014.13 was impaired based on the VSCI scores.

McClure River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			13.27

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q12R-01-BAC** **Russell Prater Creek**

Location: This segment extends from the headwaters at Poplar Gap downstream to the confluence with Russell Fork.

City / County: Buchanan Co. Dickenson Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6ARC000.40 had a 22% exceedence of the E.coli water quality standard.

Russell Prater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			11.28

Sources:

Rural (Residential Areas)

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q12R-01-BEN** **Russell Prater Creek**

Location: This segment extends from the headwaters of Russell Prater Creek downstream to the confluence with Russell Fork, it also includes Jappa's Fork which is a tributary to Barts Lick Creek in western Buchanan County.

City / County: Buchanan Co. Dickenson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 4A

The biological stations located at 6ARPC002.45 and 6AXBF000.40 were impaired based on their VSCI scores.

Russell Prater Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			11.28

Sources:

Coal Mining

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q12R-02-PCB** **Russell Fork**

Location: This segment includes the upper mainstem from the Pound River confluence upstream to Russell Prater Creek confluence.

City / County: Dickenson Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The fish tissue station located at 6ARSS025.55 found PCBs above the screening value in four species.

Russell Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
PCB in Fish Tissue - Total Impaired Size by Water Type:			3.77

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q12R-03-BAC** **Russell Fork**

Location: This segment extends from the VA/KY political boundary upstream 2.2 miles. Elkhorn City, KY raw water intake. It also includes Barts Lick Creek which is a tributary to Russell Fork.

City / County: Buchanan Co. Dickenson Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6ARSS014.15 had a 15% exceedence of the E.coli water quality standard and station 6ABAI000.85 had a 22% exceedence of the E.coli standard.

Russell Fork	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.94

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q13R-01-BEN** **South Fork Pound River & tributaries**

Location: This segment includes the South Fork of the Pound River at the headwaters and continues downstream to the confluence with the North Fork Pound River including Phillips Creek and Donald Branch.

City / County: Dickenson Co.

Use(s): Aquatic Life

Cause(s) /

VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Biological stations located at 6APNS004.98 and 6APNS000.40 were impaired based on VSCI scores.

South Fork Pound River & tributaries	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			10.73

Sources:

Coal Mining

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q13R-02-BEN** **North Fork Pound River**

Location: This segment includes the mainstem from the backwaters of North Fork Pound Lake, river mile 1.08, downstream to the confluence with Pound River. It also includes the PWS segment from intake in the North Fork Pound Reservoir, upstream five miles on all tributaries.

City / County: Dickenson Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6APNK000.08 was impaired based on VSCI scores.

North Fork Pound River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			1.20

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q13R-03-BAC** **Pound River**

Location: This segment of the Pound River extends from the North and South Fork Pound Rivers downstream to the lake backwaters..

City / County: Dickenson Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station located at 6APNR023.86 had a 33% exceedence of the E.coli water quality standard, station 6APNR035.66 had a 50% exceedence of the E.coli standard and station 6APNR017.79 had a 17% exceedence of the E.coli water quality standard.

Pound River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			19.70

Sources:

Rural (Residential Areas) Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q13R-06-BEN** **Pound River**

Location: This segment includes the Pound River from Georges Fork confluence upstream to the confluence of the North Fork and South Fork Pound Rivers.

City / County: Dickenson Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

The biological station located at 6APNR034.58 was impaired based on VSCI scores.

Pound River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			16.60

Sources:

Source Unknown

Appendix A - List of Impaired (Category 5) Waters in 2008*

Tennessee and Big Sandy River Basins

Cause Group Code **Q14R-01-BAC** **Cranesnest River**

Location: This segment extends from the headwaters downstream to the confluence with Bartley Branch at the backwaters of the Flannagan Reservoir.

City / County: Dickenson Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

The AWQM station locate at 6ACNR021.72 had a 17% exceedence of the E.coli water quality standard and station 6ACNR009.12 had a 22% exceedence of the E.coli standard.

Cranesnest River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			7.29

Sources:

Rural (Residential Areas)